* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page for STN Seminar Schedule - N. America
NEWS 2	APR 02	CAS Registry Number Crossover Limits Increased to 500,000 in Key STN Databases
NEWS 3	APR 02	PATDPAFULL: Application and priority number formats enhanced
NEWS 4	APR 02	DWPI: New display format ALLSTR available
NEWS 5	APR 02	New Thesaurus Added to Derwent Databases for Smooth Sailing through U.S. Patent Codes
NEWS 6	APR 02	EMBASE Adds Unique Records from MEDLINE, Expanding Coverage back to 1948
NEWS 7	APR 07	50,000 World Traditional Medicine (WTM) Patents Now Available in CAplus
NEWS 8	APR 07	MEDLINE Coverage Is Extended Back to 1947
NEWS 9	JUN 16	WPI First View (File WPIFV) will no longer be available after July 30, 2010
NEWS 10	JUN 18	DWPI: New coverage - French Granted Patents
NEWS 11	JUN 18	CAS and FIZ Karlsruhe announce plans for a new STN platform
NEWS 12	JUN 18	IPC codes have been added to the INSPEC backfile (1969-2009)
NEWS 13	JUN 21	Removal of Pre-IPC 8 data fields streamline displays in CA/CAplus, CASREACT,and MARPAT
NEWS 14	JUN 21	Access an additional 1.8 million records exclusively enhanced with 1.9 million CAS Registry Numbers -- EMBASE Classic on STN
NEWS 15	JUN 28	Introducing "CAS Chemistry Research Report": 40 Years of Biofuel Research Reveal China Now Atop U.S. in Patenting and Commercialization of Bioethanol
NEWS 16	JUN 29	Enhanced Batch Search Options in DGENE, USGENE, and PCTGEN
NEWS 17	JUL 19	Enhancement of citation information in INPADOC databases provides new, more efficient competitor analyses
NEWS 18	JUL 26	CAS coverage of global patent authorities has expanded to 61 with the addition of Costa Rica
NEWS 19	SEP 15	MEDLINE Cited References provide additional revelant records with no additional searching.
NEWS 20	OCT 04	Removal of Pre-IPC 8 data fields streamlines displays in USPATFULL, USPAT2, and USPATOLD.
NEWS 21	OCT 04	Precision of EMBASE searching enhanced with new chemical name field
NEWS 22	OCT 06	Increase your retrieval consistency with new formats or for Taiwanese application numbers in CA/CAplus.
NEWS 23	OCT 21	CA/CAplus kind code changes for Chinese patents increase consistency, save time
NEWS 24	OCT 22	New version of STN Viewer preserves custom highlighting of terms when patent documents are saved in .rtf format
NEWS 25	OCT 28	INPADOCDB/INPAFAMDB: Enhancements to the US national patent classification.
NEWS 26	NOV 03	New format for Korean patent application numbers in CA/CAplus increases consistency, saves time.

NEWS EXPRESS FEBRUARY 15 10 CURRENT WINDOWS VERSION IS V8.4.2, AND CURRENT DISCOVER FILE IS DATED 07 JULY 2010.

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FILE 'HOME' ENTERED AT 20:16:32 ON 03 NOV 2010

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.22	0.22

FILE 'CAPLUS' ENTERED AT 20:16:44 ON 03 NOV 2010
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FILE COVERS 1907 - 3 Nov 2010 VOL 153 ISS 19
FILE LAST UPDATED: 2 Nov 2010 (20101102/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2010

CAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2010.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> norovirus

	1157	NOROVIRUS
	479	NOROVIRUSES
L1	1189	NOROVIRUS
		(NOROVIRUS OR NOROVIRUSES)

=> (small round virus)

	1571738	SMALL
	59	SMALLS

```
       1571791 SMALL
                  (SMALL OR SMALLS)
         51471 ROUND
          6800 ROUNDS
         57348 ROUND
                  (ROUND OR ROUNDS)
        452035 VIRUS
         94992 VIRUSES
        469434 VIRUS
                  (VIRUS OR VIRUSES)
L2           9 (SMALL ROUND VIRUS)
                  (SMALL(W)ROUND(W)VIRUS)

=> norwalk (w) virus
           779 NORWALK
        452035 VIRUS
         94992 VIRUSES
        469434 VIRUS
                  (VIRUS OR VIRUSES)
L3         472 NORWALK (W) VIRUS

=> sample or speciemant
MISSING TERM BEFORE 'OR'
Search expressions cannot begin with operators.

=> stool
          7256 STOOL
          2740 STOOLS
L4        9175 STOOL
                  (STOOL OR STOOLS)

=> blood (w) sample
MISSING TERM AFTER BLOOD (W
Operators must be followed by a search term, L-number, or query name.

=> biological (l) sample
MISSING TERM AFTER IOLOGICAL (L
Operators must be followed by a search term, L-number, or query name.

=> biological (s) sample
MISSING TERM AFTER IOLOGICAL (S
Operators must be followed by a search term, L-number, or query name.

=> L4 and alkaline
        152544 ALKALINE
           100 ALKALINES
        152628 ALKALINE
                  (ALKALINE OR ALKALINES)
        469821 ALK
           678 ALKS
        470186 ALK
                  (ALK OR ALKS)
        520380 ALKALINE
                  (ALKALINE OR ALK)
L5         166 L4 AND ALKALINE

=> ELISA
        109020 ELISA
          3254 ELISAS
L6      110407 ELISA
```

```
                (ELISA OR ELISAS)

=> alkaline and L6
        152544 ALKALINE
           100 ALKALINES
        152628 ALKALINE
                (ALKALINE OR ALKALINES)
        469821 ALK
           678 ALKS
        470186 ALK
                (ALK OR ALKS)
        520380 ALKALINE
                (ALKALINE OR ALK)
L7        2053 ALKALINE AND L6

=> L7 and L1
L8           0 L7 AND L1

=> L7 and L2
L9           0 L7 AND L2

=> L7 and L3
L10          1 L7 AND L3

=> L7 (s) antigen
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L7 (S) ANTIGEN'
        400268 ANTIGEN
        312128 ANTIGENS
        506713 ANTIGEN
                (ANTIGEN OR ANTIGENS)
L11        585 L7 (S) ANTIGEN

=> norovirus and L11
          1157 NOROVIRUS
           479 NOROVIRUSES
          1189 NOROVIRUS
                (NOROVIRUS OR NOROVIRUSES)
L12          0 NOROVIRUS AND L11

=> norwalk and L11
           779 NORWALK
L13          1 NORWALK AND L11

=> D L13 TRIB ABS 1

L13  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2010 ACS on STN
```

Full Text | Other References

```
ACCESSION NUMBER:          1996:697977  CAPLUS
DOCUMENT NUMBER:           125:319138
ORIGINAL REFERENCE NO.:    125:59587a,59590a
TITLE:                     Dot blot hybridization with a cDNA probe derived from
                           the human calicivirus Sapporo 1982 strain
AUTHOR(S):                 Kogawa, K.; Nakata, S.; Ukae, S.; Adachi, N.; Numata,
                           K.; Matson, D. O.; Estes, M. K.; Chiba, S.
CORPORATE SOURCE:          Dept. of Pediatrics, Sapporo Medical Univ. School of
                           Medicine, Sapporo, Japan
SOURCE:                    Archives of Virology (1996), 141(10), 1949-1959
                           CODEN: ARVIDF; ISSN: 0304-8608
```

PUBLISHER: Springer
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A dot blot hybridization assay was developed for detection of human calcivirus/Sapporo/82/J (HuCV/Sa/82) or strains closely related to HuCV/Sa/82 in stool specimens. The cDNA derived from the RNA-dependent RNA polymerase (RDRP) region of HuCV/Sa/82 was used as a pos. probe and the pBR322 DNA as a neg. control probe. Both probes were labeled with digoxigenin and the products of hybridization reaction were detected with an anti-digoxigenin antibody-**alk**. phosphatase conjugate. This assay was specific for HuCV/Sa/82 and for HuCV antigenically related to HuCV/Sa/82. The lower limit of sensitivity of this assay was estd. to be about 105 phys. particles or 10 pg of cDNA, similar to that of the previously developed **ELISA** for HuCV. In 1273 stool specimens obtained from children with acute gastroenteritis in Sapporo, Japan, 110 (8.6%) contained small round structured viruses by electron microscopy and 23 (1.8%) were pos. for HuCV antigenically related to HuCV/Sa/82 by either the hybridization assay or **ELISA**. A higher pos. rate was obtained with the dot blot assay (21%) than by **ELISA** (10%), suggesting that the dot blot assay either detects HuCV more broadly than the **ELISA** or detects HuCV covered with fecal antibodies which interrupt **antigen**-antibody reactions in the **ELISA**. Neg. results for detection of **Norwalk** virus (NV) cDNA and feline calicivirus (FCV) RNA by both this assay and the **ELISA** indicated that the HuCV/Sa/82 strain is distinct antigenically and genetically from NV and FCV.
OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

=> D L10 IBIB ABS

L10 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1996:697977 CAPLUS
DOCUMENT NUMBER: 125:319138
ORIGINAL REFERENCE NO.: 125:59587a,59590a
TITLE: Dot blot hybridization with a cDNA probe derived from the human calicivirus Sapporo 1982 strain
AUTHOR(S): Kogawa, K.; Nakata, S.; Ukae, S.; Adachi, N.; Numata, K.; Matson, D. O.; Estes, M. K.; Chiba, S.
CORPORATE SOURCE: Dept. of Pediatrics, Sapporo Medical Univ. School of Medicine, Sapporo, Japan
SOURCE: Archives of Virology (1996), 141(10), 1949-1959
CODEN: ARVIDF; ISSN: 0304-8608
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DOCUMENT TYPE: Journal
LANGUAGE: English
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OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

=> L11 and L3
L14 1 L11 AND L3

=> D L14 IBIB AES

L14 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1996:697977 CAPLUS
DOCUMENT NUMBER: 125:319138
ORIGINAL REFERENCE NO.: 125:59587a,59590a
TITLE: Dot blot hybridization with a cDNA probe derived from the human calicivirus Sapporo 1982 strain
AUTHOR(S): Kogawa, K.; Nakata, S.; Ukae, S.; Adachi, N.; Numata, K.; Matson, D. O.; Estes, M. K.; Chiba, S.
CORPORATE SOURCE: Dept. of Pediatrics, Sapporo Medical Univ. School of Medicine, Sapporo, Japan
SOURCE: Archives of Virology (1996), 141(10), 1949-1959 CODEN: ARVIDF; ISSN: 0304-8608
PUBLISHER: Springer
DOCUMENT TYPE: Journal
LANGUAGE: English

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OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

```
=> norovirus (s) stability
          1157 NOROVIRUS
           479 NOROVIRUSES
          1189 NOROVIRUS
                  (NOROVIRUS OR NOROVIRUSES)
        884986 STABILITY
         30825 STABILITIES
        899552 STABILITY
                  (STABILITY OR STABILITIES)
L15          7 NOROVIRUS (S) STABILITY

=> calicivirus and stability
           895 CALICIVIRUS
           295 CALICIVIRUSES
           958 CALICIVIRUS
                  (CALICIVIRUS OR CALICIVIRUSES)
        884986 STABILITY
         30825 STABILITIES
        899552 STABILITY
                  (STABILITY OR STABILITIES)
L16         26 CALICIVIRUS AND STABILITY

=> sapporo and ELISA
           651 SAPPORO
        109020 ELISA
          3254 ELISAS
        110407 ELISA
                  (ELISA OR ELISAS)
L17         16 SAPPORO AND ELISA

=> pH and L17
       1539497 PH
         11799 PHS
       1544422 PH
                  (PH OR PHS)
L18          0 PH AND L17

=> (pH 9 or pH 10)
       1539497 PH
         11799 PHS
       1544422 PH
                  (PH OR PHS)
       2264914 9
         41694 PH 9
                  (PH(W)9)
       1539497 PH
         11799 PHS
       1544422 PH
                  (PH OR PHS)
       4622617 10
         26809 PH 10
                  (PH(W)10)
L19      66570 (PH 9 OR PH 10)

=> L19 and L1
L20         11 L19 AND L1

=> L19 and L2
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L21           0 L19 AND L2

=> L19 and L3
L22           6 L19 AND L3

=> L19 and L16
L23           0 L19 AND L16

=> L19 and L17
L24           0 L19 AND L17

=> D L22 IBIB ABS 1-6

L22  ANSWER 1 OF 6  CAPLUS  COPYRIGHT 2010 ACS on STN
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Full Text | Citing References

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ACCESSION NUMBER:          2010:726158  CAPLUS
TITLE:                     PCR, real-time PCR analysis on Norwalk virus in
                           direct test on artificial-contaminated foodstuffs
AUTHOR(S):                 Zoni, R.; Zanelli, R.; Tibollo, S.; Colucci, M. E.;
                           Sansebastiano, G.
CORPORATE SOURCE:          Department of Public Health, Hygiene Section,
                           University of Parma, Parma, Italy
SOURCE:                    Quality Assurance and Safety of Crops & Foods (2010),
                           2(2), 78-83
                           CODEN: QASCA2; ISSN: 1757-837X
PUBLISHER:                 Wiley-Blackwell
DOCUMENT TYPE:             Journal; (online computer file)
LANGUAGE:                  English
AB   Introduction The most commonly used methods to det. and identify Norwalk
     virus are based on mol. biol.  Methods A viral extn. protocol from food
     samples was studied in this work using artificial contamination test.  It
     consists of a new protocol with a phase of viral elution from the food
     matrix performed using an eluting soln. (glycine and beef ext. at 3% pH
     9) and a concn. phase with polyethylene glycol 8000.  To detect
     Noroviruses, two techniques of mol. biol., polymerase chain reaction and
     real-time polymerase chain reaction, were compared.  At the same time,
     tests of direct viral identification were conducted on soft fruits and
     salad obtained from the market.  Results From the results obtained it was
     possible to evaluate how the phase of viral recovery represents an
     important crit. point of the protocol.  Conclusion It was possible to
     identify a greater sensitivity of the real-time polymerase chain reaction
     compared with the traditional polymerase chain reaction.
REFERENCE COUNT:           11    THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS
                                 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22  ANSWER 2 OF 6  CAPLUS  COPYRIGHT 2010 ACS on STN
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Full Text | Citing References

```
ACCESSION NUMBER:          2008:515913  CAPLUS
DOCUMENT NUMBER:           148:522700
TITLE:                     Method for enriching virus in wastewater or tail water
                           from wastewater treatment plant
INVENTOR(S):               He, Miao; Li, Dan; Shi, Hanchang; Yang, Wan; Hu, Xin
PATENT ASSIGNEE(S):        Tsinghua University, Peop. Rep. China
SOURCE:                    Faming Zhuanli Shenqing Gongkai Shuomingshu, 26pp.
                           CODEN: CNXXEV
DOCUMENT TYPE:             Patent
LANGUAGE:                  Chinese
FAMILY ACC. NUM. COUNT:    1
```

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101164918	A	20080423	CN 2007-10175738	20071011
CN 100509656	C	20090708		
PRIORITY APPLN. INFO.:			CN 2007-10175738	20071011

AB The title method comprises adding Al3+ (AlCl3+) into wastewater or tail H2O from wastewater treatment plant to 0.5-1 mol/L, adjusting pH to 3.0-3.5, adsorbing with silica gel particles for 10-20 min, washing the silica gel with H2SO4 (pH = 3.0-3.5), eluting with urea-lysine buffer soln. (**pH = 9**.0-9.5), centrifuging, and ultrafiltering to obtain virus-enriched wastewater sample. The method has high recovery ratio, good effect and low cost, and the enriched samples can be used in mol. biol. study.

L22 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 2004:554269 CAPLUS
DOCUMENT NUMBER: 141:212191
TITLE: Determination of naturally occurring noroviruses in coastal seawater by alkaline elution after acid rinse using negatively charged membrane
AUTHOR(S): Katayama, H.; Tanaka, A.; Otaki, M.; Ohgaki, S.
CORPORATE SOURCE: Institute of Environmental Studies, University of Tokyo, Bunkyo-ku, Tokyo, 113-8656, Japan
SOURCE: Water Science & Technology: Water Supply (2004), 4(2), 73-77
CODEN: WSTWBM; ISSN: 1606-9749
PUBLISHER: IWA Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A new procedure for concg. viruses from seawater using a neg. charged membrane eluting with alk. soln. (NaOH, **pH 10**.5) after acid rinse (H2SO4, pH 3.0) was applied to det. naturally occurring enteric viruses in seawater in Tokyo bay. The levels of total coliforms and fecal coliforms ranged from 40 to 68000 (cfu/100mL) and from 2 to 32000 (cfu/100mL), resp. The F-specific phages were not detected from 5 mL of 53 samples out of 61 tested. The levels of indicator microbes were not found to be related to the tide in Tokyo bay. Enteroviruses were not detected by cell culture RT-PCR, but detected by direct RT-PCR from 10% of the samples. Noroviruses were found pos. from 31% of the winter samples (n = 29), whereas only 3% from the summer samples (n = 32). These results of direct RT-PCR were equiv. to detn. of **Norwalk viruses** occurring in 50 mL of seawater. Probably the levels of noroviruses in Tokyo bay were higher in winter than those of enteroviruses. The virus concn. method used is useful for detn. of naturally occurring viruses in seawater, esp. when applied prior to PCR detection of nonculturable viruses.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 2003:542916 CAPLUS
DOCUMENT NUMBER: 139:168840
TITLE: Molecular detection of **Norwalk viruses** in drinking water by filtration-elution methods using an alternative amino acid eluent

AUTHOR(S): Hill, Vincent R.; Wu, Ming-Jing; Hamidjaja, Radi; Sobsey, Mark D.
CORPORATE SOURCE: Division of Consolidated Laboratory Services, Virginia Department of General Services, Richmond, VA, 23219, USA
SOURCE: Proceedings - Water Quality Technology Conference (2002) 672-683
CODEN: PWQCD2; ISSN: 0164-0755
PUBLISHER: American Water Works Association
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English

AB Norwalk and other Noroviruses are being increasingly recognized as major contributors to the disease burden caused by contaminated water supplies. Improved methods for the detection and quantitation of these microbes in water is essential for performing disease outbreak investigations and developing monitoring strategies for management efforts to minimize human exposures to contaminated water. Filtration-adsorption is commonly used to recover and conc. these viruses from large vols. of water, but some research suggests that commonly-used beef ext.-based filter elution solns. contain substances that inhibit reverse transcriptase-polymerase chain reaction (RT-PCR) assays for detecting these viruses. The results of this study indicate that a simple, well-defined eluent composed of L-lysine, and the detergent, Triton X-100, was an effective alternative to eluents contg. beef ext. No significant differences in **Norwalk Virus** recovery were measured between the lysine- and beef ext.-based eluents when virus RNA was heat-released from eluent concs. of tap water expts. When the filtration-elution method was applied to tap water seeded with approx. 10^3 **Norwalk viruses**, the lysine-based eluent was found to yield significantly greater recoveries of **Norwalk viruses** than 3% beef ext., 0.05 M glycine (**pH 9.5**). Data from filtration-elution expts. with seeded surface water also indicated that the lysine-based eluent achieved similar or greater recoveries of **Norwalk viruses** compared to the beef ext.-based eluent. The results from this study show that a high-molar lysine eluent can be an effective alternative to beef ext. eluents for detecting relatively low levels of **Norwalk viruses** in tap water and surface water samples.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 2002:209981 CAPLUS
DOCUMENT NUMBER: 136:382461
TITLE: Development of a virus concentration method and its application to detection of enterovirus and **norwalk virus** from coastal seawater
AUTHOR(S): Katayama, Hiroyuki; Shimasaki, Akihiro; Ohgaki, Shinichiro
CORPORATE SOURCE: Department of Urban Engineering, School of Engineering, University of Tokyo, Tokyo, 113-8656, Japan
SOURCE: Applied and Environmental Microbiology (2002), 68(3), 1033-1039
CODEN: AEMIDF; ISSN: 0099-2240
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We developed a new procedure for concn. of enteric viruses from water using a neg. charged membrane. Rinsing the membrane with 0.5 mM H_2SO_4 (pH

3.0) in order to elute cations prior to viral elution with 1 mM NaOH (**pH** 10.5) promoted poliovirus recovery yields from 33 to 95% when applied to pure water and 38 to 89% when applied to natural seawater from Tokyo Bay, Japan, resp. This method showed av. recovery yields of spiked poliovirus of 62% (n = 8) from 1 L of artificial seawater. This method showed higher recovery yields (>61%) than that of the conventional method using pos. charged membrane (6%) when applied to seawater. This method is also free from beef ext. elution, which has an inhibitory effect in the subsequent viral genome detection by reverse transcription-PCR. Naturally occurring **Norwalk viruses** from 2 L of Tokyo Bay water in winter and infectious enteroviruses from 2 L of recreational coastal seawater in summer were detected by using this viral concn. method.

OS.CITING REF COUNT: 85 THERE ARE 85 CAPLUS RECORDS THAT CITE THIS RECORD (85 CITINGS)

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 2001:671115 CAPLUS
DOCUMENT NUMBER: 136:242384
TITLE: Rapid and efficient extraction method for reverse transcription-PCR detection of hepatitis A and Norwalk-like viruses in shellfish
AUTHOR(S): Kingsley, David H.; Richards, Gary P.
CORPORATE SOURCE: Microbial Food Safety Research Unit, Agricultural Research Service, U.S. Department of Agriculture, Delaware State University, Dover, DE, 19901, USA
SOURCE: Applied and Environmental Microbiology (2001), 67(9), 4152-4157
CODEN: AEMIDF; ISSN: 0099-2240
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB As part of an effort to develop a broadly applicable test for Norwalk-like viruses and hepatitis A virus (HAV) in shellfish, a rapid extn. method that is suitable for use with one-step reverse transcription (RT)-PCR-based detection methods was developed. The method involves virus extn. using a **pH** 9.5 glycine buffer, polyethylene glycol (PEG) pptn., Tri-reagent, and purifn. of viral poly(A) RNA by using magnetic poly(dT) beads. This glycine-PEG-Tri-reagent-poly(dT) method can be performed in less than 8 h on hard-shell clams (Mercenaria mercenaria) and Eastern oysters (Crassostrea virginica) and, when coupled with RT-PCR-based detection, can yield results within 24 h. Obsd. sensitivities for seeded shellfish exts. are as low as 0.015 PFU of HAV and 22.4 RT-PCR50 units for **Norwalk virus**. Detection of HAV in live oysters exptl. exposed to contaminated seawater is also demonstrated. An adaptation of this method was used to identify HAV in imported clams (tentatively identified as Ruditapes philippinarum) implicated in an outbreak of food-borne viral illness. All of the required reagents are com. available. This method should facilitate the implementation of RT-PCR testing of com. shellfish.

OS.CITING REF COUNT: 43 THERE ARE 43 CAPLUS RECORDS THAT CITE THIS RECORD (43 CITINGS)

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> D L20 TERM ABS 1-11

L20 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | More References

ACCESSION NUMBER: 2010:1299140 CAPLUS
TITLE: Size and mechanical stability of **norovirus** capsids depend on pH: a nanoindentation study
AUTHOR(S): Cuellar, J. L.; Meinhoevel, F.; Hoehne, M.; Donath, E.
CORPORATE SOURCE: Institute of Medical Physics and Biophysics, Leipzig University, Leipzig, D-04107, Germany
SOURCE: Journal of General Virology (2010), 91(10), 2449-2456
CODEN: JGVIAY; ISSN: 0022-1317
PUBLISHER: Society for General Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Norovirus**-like particles were imaged using at. force microscopy. The mech. stability of the virus-like particles (VLPs) was probed by nanoindentation at pH values ranging from 2 to 10. This range includes pH values of the natural environment during the life cycle of **noroviruses**. The resistance of VLPs to indentation was const. at acidic and neutral pH. The Young's modulus was of the order of 30 MPa. At basic pH the compliance of the capsid increased along with an increase in diam. This specific pH-dependent mech. response of the capsid may be related to mechanisms controlling uptake and release of the RNA during infection. Consecutive indentations with pressures ≤300 bar demonstrated the ability of the capsids to fully recover from deformations comparable with the size of the capsid. The capsids can be viewed as nanocontainers with an inbuilt self-repair mechanism. At **pH 10** the capsids lost their stability and were irreversibly destroyed after one single indentation.
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | More References

ACCESSION NUMBER: 2010:726158 CAPLUS
TITLE: PCR, real-time PCR analysis on Norwalk virus in direct test on artificial-contaminated foodstuffs
AUTHOR(S): Zoni, R.; Zanelli, R.; Tibollo, S.; Colucci, M. E.; Sansebastiano, G.
CORPORATE SOURCE: Department of Public Health, Hygiene Section, University of Parma, Parma, Italy
SOURCE: Quality Assurance and Safety of Crops & Foods (2010), 2(2), 78-83
CODEN: QASCA2; ISSN: 1757-837X
PUBLISHER: Wiley-Blackwell
DOCUMENT TYPE: Journal; (online computer file)
LANGUAGE: English
AB Introduction The most commonly used methods to det. and identify Norwalk virus are based on mol. biol. Methods A viral extn. protocol from food samples was studied in this work using artificial contamination test. It consists of a new protocol with a phase of viral elution from the food matrix performed using an eluting soln. (glycine and beef ext. at 3% **pH 9**) and a concn. phase with polyethylene glycol 8000. To detect **Noroviruses**, two techniques of mol. biol., polymerase chain reaction and real-time polymerase chain reaction, were compared. At the same time, tests of direct viral identification were conducted on soft fruits and salad obtained from the market. Results From the results obtained it was possible to evaluate how the phase of viral recovery represents an important crit. point of the protocol. Conclusion It was possible to identify a greater sensitivity of the real-time polymerase chain reaction

compared with the traditional polymerase chain reaction.
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN
Full Text | Citing References

ACCESSION NUMBER: 2010:322099 CAPLUS
TITLE: Attachment of **noroviruses** to stainless steel and their inactivation, using household disinfectants
AUTHOR(S): Girard, Maryline; Ngazoa, Solange; Mattison, Kirsten; Jean, Julie
CORPORATE SOURCE: Institute of Nutraceuticals and Functional Foods, Universite Laval, Quebec, QC, G1V 0A6, Can.
SOURCE: Journal of Food Protection (2010), 73(2), 400-404 CODEN: JFPRDR; ISSN: 0362-028X
PUBLISHER: International Association for Food Protection
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The aims of this study were (i) to evaluate the impact of pH and relative humidity on the attachment of **norovirus** (NoV) to fomites and (ii) to evaluate the effectiveness of different household disinfectants on NoV attached to fomites. Plaque assay and/or real-time reverse transcription PCR assay were used to det. the amt. of murine and human NoV attached to stainless steel disks, i.e., the amt. removed by sonication in elution buffer but not by surface rinses with water only. An enzymic pretreatment was used for both human and murine NoV before the real-time reverse transcription PCR assay to avoid detection of RNA assocd. with inactivated virus. For both murine and human NoV, max. attachment was obtained after a contact time of 10 min. Attachment of NoV to stainless steel does not appear to be affected by pH, although murine NoV was less attached (<2 log units) at **pH 9** and at low relative humidity (25%) than was human NoV (3 log units). Sodium hypochlorite (3%) was the most effective disinfectant, producing a greater than 3-log redn. after 10 min compared with less than a 1-log redn. after treatment with quaternary ammonium compds. and ethoxylated alcs. Murine NoV was more sensitive than human NoV to disinfectants by approx. 1 to 2 log units. These results will help improve strategies for decontaminating surfaces harboring NoV and thus reduce the incidence of illness caused by these pathogens in the food sector and domestic environments.
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN
Full Text | Citing References

ACCESSION NUMBER: 2009:597349 CAPLUS
DOCUMENT NUMBER: 151:423838
TITLE: Development of a virus elution and concentration procedure for detecting **norovirus** in cabbage and lettuce
AUTHOR(S): Moon, Aerie; Hwang, In-Gyun; Choi, Weon Sang
CORPORATE SOURCE: Department of Biotechnology, Dongguk University, Gyeongbuk, 780-714, S. Korea
SOURCE: Food Science and Biotechnology (2009), 18(2), 407-412 CODEN: FSBOBR; ISSN: 1226-7708
PUBLISHER: Korean Society of Food Science and Technology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In this study, a rapid and efficient concg. procedure that can be used for

detecting viruses in vegetables was developed. The Sabin strain of poliovirus type 1 was used to evaluate the efficiency of virus recovery. The procedure included: (a) elution with 0.25 M threonine-0.3 M NaCl **pH 9**.5; (b) polyethylene glycol (PEG) 8000 pptn.; (c) chloroform extn.; (d) 2nd PEG pptn.; (f) RNA extn.; (g) reverse transcription-polymerase chain reaction (RT-PCR) combined with semi-nested PCR. The overall recoveries by elution/concn. were 29.0% from cabbage and 13.7% from lettuce. The whole procedure usually takes 18 h. The overall detection sensitivity was 100 RT-PCR units of genogroup II **norovirus** (GII NoV)/25 g cabbage and 100 RT-PCR units of GII NoV/10 g lettuce. The virus detecting method developed in this study should facilitate the detection of low levels of NoV in cabbage and lettuce.

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 2008:1202002 CAPLUS

DOCUMENT NUMBER: 149:511630

TITLE: Optimization of methods for detecting **norovirus** on various fruit

AUTHOR(S): Kim, Hee-Yeon; Kwak, In-Shin; Hwang, In-Gyun; Ko, GwangPyo

CORPORATE SOURCE: Department of Environmental Health and Institute of Health and Environment, School of Public Health, Seoul National University, Seoul, S. Korea

SOURCE: Journal of Virological Methods (2008), 153(2), 104-110 CODEN: JVMEDH; ISSN: 0166-0934

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Methods for detecting **norovirus** (NoV) in food are crucial for investigation and prevention of outbreaks caused by NoV-contaminated food. However, current NoV detection methods have not been well examd. or optimized. In this study, the effectiveness of various methods for eluting NoV from various fruit, concg. the virus using polyethylene glycol (PEG), and extg. the viral RNA for subsequent assay by RT-PCR was optimized. First, six different buffers previously described for eluting NoV from fruit surfaces were evaluated. A known amt. of NoV was spiked onto the surface of grapes, strawberries, and raspberries, and the virus was recovered with distd. water, 0.05 M glycine-0.14 M NaCl (pH 7.5), 2.9% tryptose phosphate broth-6% glycine, 100 mM Tris-HCl (**pH 9**.5), 50 mM glycine-50 mM MgCl2 (**pH 9**.5), or 3% beef ext. Quantitation of the recovered virus using RT-PCR revealed that the most effective elution buffer was 3% beef ext. Secondly, to optimize a method for concg. the recovered NoV, the key parameters of PEG pptn., a typical method for concg. enteric virus, were investigated. The influence of PEG mol. wt. and the duration and temp. of the pptn. procedure were examd. NoV was concd. most efficiently by pptn. when PEG10,000 was used for 4 h at room temp. Finally, five different methods for nucleic acid extn. were evaluated. Among RNA extn. methods examd., QIAamp Viral RNA Mini kit showed the best recovery efficiency. Using the optimized method, approx. 6-80% of the seeded NoV was recovered from the various fruit.

OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 2007:193558 CAPLUS
DOCUMENT NUMBER: 146:259145
TITLE: Disinfectant solutions containing polyhexamethylenebiguanide compounds, and disinfecting products
INVENTOR(S): Sasaki, Nobuyoshi
PATENT ASSIGNEE(S): Daio Paper Corporation, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007045732	A	20070222	JP 2005-230600	20050809
PRIORITY APPLN. INFO.:			JP 2005-230600	20050809

AB The invention provides a disinfectant soln. characterized by contg. polyhexamethylenebiguanide compd. 0.05-0.5 % at **pH 9**-12, wherein the disinfectant soln. immediately inactivates **norovirus** at a concn. without irritating skin. A disinfecting product impregnated with the disinfectant soln. is also disclosed. For example, a soln. (**pH 9**.9) contg. polyhexamethylenebiguanide compd. 0.1, glycine 0.08, NaCl 0.06, NaOH 0.02, ethanol 50, and water balance to 100 % was formulated, and examd. for its inactivating effect against feline calicivirus.

L20 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 2007:66167 CAPLUS
DOCUMENT NUMBER: 146:294397
TITLE: Procedure for rapid concentration and detection of enteric viruses from berries and vegetables
AUTHOR(S): Butot, S.; Putallaz, T.; Sanchez, G.
CORPORATE SOURCE: Quality & Safety Assurance Department, Nestle Research Center, Lausanne, Switz.
SOURCE: Applied and Environmental Microbiology (2007), 73(1), 186-192
CODEN: AEMIDF; ISSN: 0099-2240
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Several hepatitis A virus (HAV) and **norovirus** (NV) outbreaks due to consumption of berries and vegetables were reported during recent years. To facilitate the detection of enteric viruses that may be present on different fresh and frozen products, we developed a rapid and sensitive detection method for HAV, NV, and rotavirus (RV). Initial expts. focused on optimizing the compn. of the elution buffer, improving the viral concn. method, and evaluating the performance of various extn. kits. Viruses were extd. from the food surface by a direct elution method in a glycine-Tris (**pH 9**.5) buffer contg. 1% beef ext. and concd. by ultrafiltration. Occasionally, PCR inhibitors were present in the processed berry samples, which gave relatively poor detection limits. However, this problem was overcome by adding a pectinase treatment in the protocol, which markedly improved the sensitivity of the method. After

optimization, this concn. method was applied in combination with real-time reverse transcription-PCR (RT-PCR) using specific primers in various types of berries and vegetables. The av. detection limits were 1 50% tissue culture infective dose (TCID50), 54 RT-PCR units, and 0.02 TCID50 per 15 g of food for HAV, NV, and RV, resp. Based on our results, it is concluded that this procedure is suitable to detect and quantify enteric viruses within 6 h and can be applied for surveillance of enteric viruses in fresh and frozen products.

OS.CITING REF COUNT: 24 THERE ARE 24 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)

REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | More References

ACCESSION NUMBER: 2006:403225 CAPLUS
DOCUMENT NUMBER: 145:203580
TITLE: Development of an extraction and concentration procedure and comparison of RT-PCR primer systems for the detection of hepatitis A virus and **norovirus** GII in green onions
AUTHOR(S): Guevremont, Evelyne; Brassard, Julie; Houde, Alain; Simard, Carole; Trottier, Yvon-Louis
CORPORATE SOURCE: Saint-Hyacinthe Laboratory, Canadian Food Inspection Agency, Saint-Hyacinthe, QC, J2S 8E3, Can.
SOURCE: Journal of Virological Methods (2006), 134(1-2), 130-135
CODEN: JVMEDH; ISSN: 0166-0934
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Vegetables can be considered as a vector of transmission for human hepatic and enteric viruses such as hepatitis A virus (HAV) and **noroviruses** when contaminated by spoiled irrigation water or when prepd. by infected food handlers. Recently, outbreaks of HAV have been reported in the USA involving fresh green onions. A viral elution-concn. method was developed for the detection of HAV and **norovirus** contaminated green onions by RT-PCR. Repeated pipetting/washings of the surface with a **pH 9.5** glycine-buffered soln. allowed the elution of viruses from the vegetables. Concn. of the viral load was performed by a polyethylene glycol (PEG) pptn. procedure. Viral RNAs were extd. and purified using a combination of Trizol-chloroform and poly(dT) magnetic beads methods. Different sets of primers, including two newly designed primers sets for HAV RT-PCR, were tested in order to achieve the best anal. sensitivity. Using the new primer design, it was possible to detect 100 TCID50%/25 g of HAV in fresh green onions, while 1 RT-PCRU/25 g was detected for **noroviruses** GII using previously described primers. This method, based on mol. tools, would be useful for diagnostic labs. in order to perform viral analyses of such commodities as fresh vegetables in cases of foodborne infections.

OS.CITING REF COUNT: 24 THERE ARE 24 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | More References

ACCESSION NUMBER: 2004:554269 CAPLUS
DOCUMENT NUMBER: 141:212191

TITLE: Determination of naturally occurring **noroviruses** in coastal seawater by alkaline elution after acid rinse using negatively charged membrane
AUTHOR(S): Katayama, H.; Tanaka, A.; Otaki, M.; Ohgaki, S.
CORPORATE SOURCE: Institute of Environmental Studies, University of Tokyo, Bunkyo-ku, Tokyo, 113-8656, Japan
SOURCE: Water Science & Technology: Water Supply (2004), 4(2), 73-77
CODEN: WSTWBM; ISSN: 1606-9749
PUBLISHER: IWA Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A new procedure for concg. viruses from seawater using a neg. charged membrane eluting with alk. soln. (NaOH, **pH 10.5**) after acid rinse (H2SO4, pH 3.0) was applied to det. naturally occurring enteric viruses in seawater in Tokyo bay. The levels of total coliforms and fecal coliforms ranged from 40 to 68000 (cfu/100mL) and from 2 to 32000 (cfu/100mL), resp. The F-specific phages were not detected from 5 mL of 53 samples out of 61 tested. The levels of indicator microbes were not found to be related to the tide in Tokyo bay. Enteroviruses were not detected by cell culture RT-PCR, but detected by direct RT-PCR from 10% of the samples. **Noroviruses** were found pos. from 31% of the winter samples (n = 29), whereas only 3% from the summer samples (n = 32). These results of direct RT-PCR were equiv. to detn. of Norwalk viruses occurring in 50 mL of seawater. Probably the levels of **noroviruses** in Tokyo bay were higher in winter than those of enteroviruses. The virus concn. method used is useful for detn. of naturally occurring viruses in seawater, esp. when applied prior to PCR detection of nonculturable viruses.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 2004:337183 CAPLUS
DOCUMENT NUMBER: 140:428527
TITLE: Detection of **noroviruses** in tap water in Japan by means of a new method for concentrating enteric viruses in large volumes of freshwater
AUTHOR(S): Haramoto, Eiji; Katayama, Hiroyuki; Ohgaki, Shinichiro
CORPORATE SOURCE: Department of Urban Engineering, School of Engineering, University of Tokyo, Tokyo, 113-8656, Japan
SOURCE: Applied and Environmental Microbiology (2004), 70(4), 2154-2160
CODEN: AEMIDF; ISSN: 0099-2240
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A virus concn. method using a cation-coated filter was developed for large-vol. freshwater applications. Poliovirus type 1 (LSc 2ab Sabin strain) inoculated into 40 mL of MilliQ (ultrapure) water was effectively adsorbed to a neg.-charged filter (Millipore HA, 0.45-μm pore size) coated with Al ions, 99% (range, 81-114%) of which were recovered by elution with 1.0 mM NaOH (**pH 10.8**) following an acid rinse with 0.5 mM H2SO4 (pH 3.0). More than 80% poliovirus recovery yields were obtained from 500-mL, 1,000-mL, and 10-L MilliQ water and tap water samples. This method, followed by TaqMan PCR detection, was used to det. the presence of **noroviruses** in tap water in Tokyo, Japan. In a 14-mo survey, 4 (4.1%) and 7 (7.1%) of 98 tap water samples (100-532 L) contained a detectable

amt. of **noroviruses** of genotypes 1 and 2, resp. This method proved useful to survey the occurrence of enteric viruses, including **noroviruses**, in large vols. of freshwater.

OS.CITING REF COUNT: 37 THERE ARE 37 CAPLUS RECORDS THAT CITE THIS RECORD (37 CITINGS)

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 2003:542916 CAPLUS

DOCUMENT NUMBER: 139:168840

TITLE: Molecular detection of Norwalk viruses in drinking water by filtration-elution methods using an alternative amino acid eluent

AUTHOR(S): Hill, Vincent R.; Wu, Ming-Jing; Hamidjaja, Radi; Sobsey, Mark D.

CORPORATE SOURCE: Division of Consolidated Laboratory Services, Virginia Department of General Services, Richmond, VA, 23219, USA

SOURCE: Proceedings - Water Quality Technology Conference (2002) 672-683
CODEN: PWQCD2; ISSN: 0164-0755

PUBLISHER: American Water Works Association

DOCUMENT TYPE: Journal; (computer optical disk)

LANGUAGE: English

AB Norwalk and other **Noroviruses** are being increasingly recognized as major contributors to the disease burden caused by contaminated water supplies. Improved methods for the detection and quantitation of these microbes in water is essential for performing disease outbreak investigations and developing monitoring strategies for management efforts to minimize human exposures to contaminated water. Filtration-adsorption is commonly used to recover and conc. these viruses from large vols. of water, but some research suggests that commonly-used beef ext.-based filter elution solns. contain substances that inhibit reverse transcriptase-polymerase chain reaction (RT-PCR) assays for detecting these viruses. The results of this study indicate that a simple, well-defined eluent composed of L-lysine, and the detergent, Triton X-100, was an effective alternative to eluents contg. beef ext. No significant differences in Norwalk Virus recovery were measured between the lysine- and beef ext.-based eluents when virus RNA was heat-released from eluent concs. of tap water expts. When the filtration-elution method was applied to tap water seeded with approx. 103 Norwalk viruses, the lysine-based eluent was found to yield significantly greater recoveries of Norwalk viruses than 3% beef ext., 0.05 M glycine (**pH 9.5**). Data from filtration-elution expts. with seeded surface water also indicated that the lysine-based eluent achieved similar or greater recoveries of Norwalk viruses compared to the beef ext.-based eluent. The results from this study show that a high-molar lysine eluent can be an effective alternative to beef ext. eluents for detecting relatively low levels of Norwalk viruses in tap water and surface water samples.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> D history

(FILE 'HOME' ENTERED AT 20:16:32 ON 03 NOV 2010)

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     FILE 'CAPLUS' ENTERED AT 20:16:44 ON 03 NOV 2010
L1          1189 NOROVIRUS
L2             9 (SMALL ROUND VIRUS)
L3           472 NORWALK (W) VIRUS
L4          9175 STOOL
L5           166 L4 AND ALKALINE
L6        110407 ELISA
L7          2053 ALKALINE AND L6
L8             0 L7 AND L1
L9             0 L7 AND L2
L10            1 L7 AND L3
L11          585 L7 (S) ANTIGEN
L12            0 NOROVIRUS AND L11
L13            1 NORWALK AND L11
L14            1 L11 AND L3
L15            7 NOROVIRUS (S) STABILITY
L16           26 CALICIVIRUS AND STABILITY
L17           16 SAPPORO AND ELISA
L18            0 PH AND L17
L19        66570 (PH 9 OR PH 10)
L20           11 L19 AND L1
L21            0 L19 AND L2
L22            6 L19 AND L3
L23            0 L19 AND L16
L24            0 L19 AND L17

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